

**APPARATUS AND METHOD FOR THREE-DIMENSIONAL  
RELATIVE MOVEMENT SENSING**

**Abstract of the Disclosure**

An apparatus for sensing three-dimensional relative movement includes a  
movable motion sensor including a first and a second two-dimensional array of  
photo detectors. At least one lens directs far-field images onto the first and the  
second arrays of photo detectors. The sensor is configured to generate digital  
representations of the far-field images and to generate three-dimensional relative  
movement data based on the digital representations of the far-field images. The  
movement data is indicative of motion of the sensor in three dimensions.